

L 1354-66 EWT(d)/EWT(m)/EWP(w)/EWP(t)/EWP(b)  
ACCESSION NR: AP5021937

IJP(c) EM/JD  
UR/0126/65/020/002/0274/0279  
539.292; 548.4

40  
37  
B

AUTHOR: Kostyukova, Ye. P.; Rovinskiy, B. M.; Rybakova, L. N.

TITLE: Structural changes in metals in the presence of cyclic plastic deformation

SOURCE: Fizika metallov i metallovedeniya, v. 20, no. 2, 1965, 274-279

TOPIC TAGS: metal-structure, cyclic deformations<sup>16</sup>, plastic deformation<sup>16</sup>, interference spot, crystallite, azimuthal interference spot width, reflecting crystal, dislocation structure, irreversible structural change, reversible structural change

ABSTRACT: Small rectangular plates of ultrapure aluminum (99.996%), were cold-worked, annealed for 2 hr at 550°C in a vacuum and then bent in one direction, straightened out, bent in an opposite direction, and again straightened out (a symmetric cycle). The attendant changes were examined by investigating the variation in interference spots on the roentgenograms of individual crystallites

Card 1/3

L 1354-66  
ACCESSION NR: AP5021937

in the aggregate. It was found that the azimuthal width of the interference spots is to some extent reversible in cyclically deformed specimens, which indicates an increase in the degree of perfection of the reflecting crystal and hence also a partial return of its dislocation structure to the original state. As the number of deformation cycles increases, the irreversible component of structural changes increases due to a steady increase in the degree of the blocking of dislocations. A second series of experiments dealt with the cyclic alternated (pulsating) compressive and tensile deformations of specimens of commercial iron and copper, the purpose this time being to determine the variation in the true width of the diffraction lines, and they revealed that in the presence of cyclic deformation this width not only does not decrease but even increases. This is apparently conditioned by the partial back-movement of the dislocations and their partial absorption by the sources. As a deformation cycle is reversed from one pole to the other, the angle of disorientation (flaw in the reflecting grain) in the crystallites of metals (aluminum, iron) decreases. Structural changes of an irreversible nature in unidirectional plastic deformation are greater than in arithmetically balanced cyclic plastic deformation. Orig. art. has: 5 figures, 1 formula.

Card 2/3

L-1354-66

ACCESSION NR: AP5021937

ASSOCIATION: Institut mashinovedeniya, Moscow (Institute of Mechanical Engineering) 44,57

SUBMITTED: 11Jul64

ENCL: 00

SUB CODE: SS, MM

NO REF Sov: 010

OTHER: 010

Card

3/3

ROVINSKIY, E.

v.

Osnovy Termodynamiki I Gazovoy Dinamiki, (By) Ya. Yu. Madorskii (1) E.V. Rovinskiy,  
Moskva, Voenizdat, Vol. 1, 1960-.  
210 p. diagrs., graphs, tables. (Teoriya Aviatsionnykh Dvigateley, Part 1)  
Bibliography: p. 209.

ROVINSKIY, F.Ya.

Methods of extracting radioactive elements from soils. Pochvovedenie  
no.6:99-101 Je '62. (MIRA 15:8)

1. Institut prikladnoy geofiziki AN SSSR.  
(Soils--Analysis) (Radioisotopes)

ROVINSKIY, F.Ya.; ISPRAVNIKOVA, V.V.

Determination of Sr<sup>90</sup> and Ce<sup>144</sup> in samples by extraction. Atom.  
energ. 14 no.3:285-289 Mr '63. (MIRA 16:2)  
(Strontium isotopes) (Cerium isotopes)

L 58748-65 EWA(h)/EWT(m)

ACCESSION NR: AP5012473

UR/0089/65/018/004/0379/0383  
621.039.7:628.515

10

B

AUTHOR: Rovinskij, F. Ya.

TITLE: Method of calculating the concentration of a radioactive impurity in water and in the bottom layers of stagnant water reservoirs

SOURCE: Atomnaya energiya, v. 18, no. 4, 1965, 379-383

TOPIC TAGS: radioactive contamination, <sup>19</sup>radioactive impurity concentration, stagnant reservoir contamination

ABSTRACT: The author describes some laws governing the migration and redistribution of radioactive impurities in stagnant water reservoirs following a single contamination. Equations are derived for the amount of radioactive impurity absorbed by the bottom layer in the reservoir as a result of ion-exchange and molecular adsorption after a given time. The results of the calculations are applied to tests made on two lakes, artificially contaminated with a mixture of

Card 1/2

L 58748-65

ACCESSION NR: AP5012473

the isotopes Sr<sup>90</sup>, Ru<sup>106</sup>, and Ce<sup>144</sup>. Equations for the time variation of the radioactive isotopes in the water are also obtained. The experimental data available were the results of measurements of the concentrations of the isotopes in water during five years after the introduction of the impurities into the lakes. In addition, various constants involved in the derived formulas were determined experimentally. The calculated concentrations of the radioactive impurities in the water and in the bottom layer were found to be in sufficient agreement with the experimental results. The relative rates of establishment of equilibrium in the reservoir are shown to be in the order rare earths, yttrium > ruthenium > strontium. Original article has: 4 figures, 12 formulas, and 2 tables.

ASSOCIATION: None

SUBMITTED: 17 May 64

NR REF SOV: 003

ENCL: 00

OTHER: 000

SUB CODE: NP, GO

Card

b/p  
2/2

L 07570-67 EWT(m)  
ACC NR: AP6030291

(A)

SOURCE CODE: UR/0240/66/000/008/0117/0119

L 01370-3  
ACC NR: AF6030291 (A) SOURCE SUBJ. N.  
AUTHOR: Rovinskiy, F. Ya. (Candidate of Chemical Sciences); Agre, A. L. (Candidate of Biological Sciences) 26  
(Institut prikladnoy geofiziki) B

ORG: Institute of Applied Geophysics, Moscow (Institut prikladnoy geofiziki)

ORG: Institute of Marine Sciences  
TITLE: Prediction of strontium 90 accumulation in fish

SOURCE: Gigiyena i sanitariya, no. 8, 1966, 117-119

SOURCE: Gigiyena i sanitariya, no. 8, 1980, pp. 11-12.  
TOPIC TAGS: strontium, isotope, radio strontium, radiation, radioactive fallout, food sanitation, radioactive pollution, radioactive contamination, commercial animal  
In specific conditions the Sr and Sr<sup>90</sup> accumulation factors  $F_A$  are equal

**ABSTRACT:** Under specific conditions the Sr and Sr<sup>90</sup> accumulation factors  $F_a$  are equal in magnitude if the chemical state of the Sr and Sr<sup>90</sup> solutions is identical and the accumulation time of Sr<sup>90</sup> in the organism is long enough for the establishment of an equilibrium between the organism and the solution. In view of this it is possible to predict maximum accumulations of Sr<sup>90</sup> in fish under various specific conditions by the determination of the  $F_a$  of Sr under the same conditions. Experimental determinations of the  $F_a$  of Sr<sup>90</sup>, Sr, and Ca in perch, crucian carp, and one-year-old carp show that 1) a relationship exists between the  $F_a$  of Sr<sup>90</sup> and the type of fish, 2) the  $F_a$  Sr<sup>90</sup> of the perch is highest and amounts to ~270, 3) the  $F_a$  Sr<sup>90</sup> of the one-year-old carp

UDC: 614.31:639.2]:614.777:546.42.02.90

Card 1/2

ACC NR: AP6030291

is the lowest and amounts to  $\sim 130$ , 4) the  $F_a Sr^{90}$  of the crucian carp is of intermediate value and amounts to  $\sim 190$ , 5) the magnitude of  $F_a Sr^{+2}$  and of  $F_a Ca^{+2}$  in the three types of fish is the same as the  $F_a Sr^{90}$  magnitude, and 6) the ratio of  $F_a Sr^{90} : F_a Sr^{+2}$  practically equals 1 indicating that when the fish spends a sufficiently long time in the water with the  $Sr^{90}$  and  $Sr^{+2}$  an equilibrium is established between the organism and the medium at which the  $Sr^{90}/Sr^{+2}$  in the fish equals  $Sr^{90}/Sr^{+2}$  in the water. The method for predicting  $Sr^{90}$  accumulation is unsuitable for general application inasmuch as in highly contaminated water the mineral exchange between the water could be disrupted owing to the radiation injury sustained by the fish. Orig. art. has: 1 table.

SUB CODE: 06, 19/ SUBM DATE: 16Jun65/ ORIG REF: 001/ OTH REF: 001

Card 2/2 LS

L 00034-66 EWT(m)/EWP(j)/T/EWP(t)/EWP(b) IJP(c)

JD/RM  
UR/0186/65/007/004/0394/0400  
541.183.5:546.9

ACCESSION NR: AP5020302

AUTHOR: Sinitsyn, N. M.; Rovinskiy, F. Ya.

TITLE: Adsorption of ruthenium by natural adsorbents. Adsorption of nitrosonitato-, nitrosochloro-, and chloro-complexes of ruthenium-106. 1 33  
5

SOURCE: Radiokhimiya, v. 7, no. 4, 1965, 394-400

TOPIC TAGS: ruthenium compounds, adsorption, complex compound

ABSTRACT: The purpose of this investigation was to determine the effect of the chemical state of radioactive ruthenium in solutions on its adsorption by various natural adsorbents. The effect of the nature of the adsorbent on the adsorption of ruthenium was investigated. Adsorption of nitrosonitrate complexes of ruthenium increases in the following order: sand < clay < soil (chernozem) < peat < sludge. The effect of the chemical nature of radioactive ruthenium compounds is shown in Fig. 2 (Enclosure 01). Regardless of the nature of the adsorbent, nitrosonitrate complexes are adsorbed better than nitrosochloro or chloro complexes. On the basis of adsorption curves it was established that in almost all cases radioactive ruthenium is adsorbed better from solutions containing it in the form of hydrolyzed

Card 1/3

L 00034-66  
ACCESSION NR: AP5020302

complexes. It was found that the percent of adsorption is significantly related to the length of time of contact of adsorbent with radioactive ruthenium solution. The nature of the adsorbent and the chemical state of the radioactive ruthenium in solution markedly changes the time of maximum adsorption on the adsorption curves. Change of the pH of the solution from 2 to 11 leads to increase of the adsorption of radioactive ruthenium in the form of nitrosochloro- and chloro complexes. Nitrosonitrate complexes are adsorbed most intensely at about pH=9. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: none

ENCL: 01

SUB CODE: GC, NP

SUBMITTED: 09Dec64

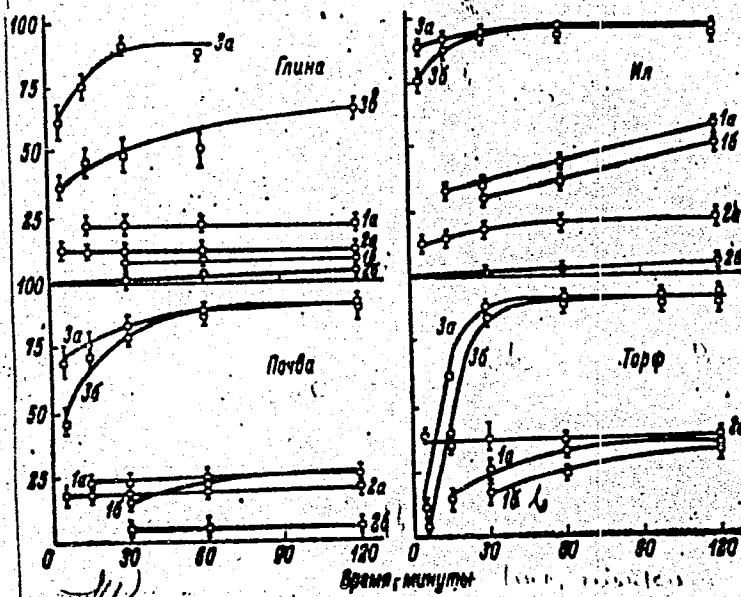
OTHER: 010

NO REF Sov: 010

Card 2/3

L 00034-66

ACCESSION NR: AP5020302



ENCLOSURE: 01

Fig. 1. The effect of the chemical structure of ruthenium-106 in solution on its adsorption by natural adsorbents (at pH=2).

Nitrosonitrate complexes:  
 1a-- hydrolyzed; 1b-- not hydrolyzed. Nitrosochloro complexes: 2a-- hydrolyzed; 2b-- not hydrolyzed. Chloro complexes: 3a-- hydrolyzed;  
 3b-- not hydrolyzed

Card 3/3

S/089/63/014/003/016/020  
B102/B186

AUTHORS: Sereda, G. A., Rovinskiy, F. Ya.

TITLE: Shift of the radioactive equilibrium between Sr<sup>90</sup> and Y<sup>90</sup> in  
the water of lakes

PERIODICAL: Atomnaya energiya, v. 14, no. 3, 1963, 326-327

TEXT: The radioactive equilibrium between Sr<sup>90</sup> and Y<sup>90</sup> that becomes establishes in 16 - 18 days is disturbed in lakes because Y<sup>90</sup> is absorbed by the ground layer. The shift of this equilibrium was studied in the water of two types of shallow water reservoirs, respectively eutrophic and dystrophic (morass). The quantity  $P = \frac{Y^{90}_{\text{fact}}}{Y^{90}_{\text{equ}}}$  was determined, Y<sup>90</sup> being found by radiochemical methods and Y<sup>90</sup> equ calculated from the Sr<sup>90</sup> content. In all cases the Y<sup>90</sup> content was below equilibrium and in morass there was virtually none. The rate of elimination of Y<sup>90</sup> from the water through absorption by the ground layer was calculated from the relation  $C_t = C_0 e^{-kt}$ , where  $C_t$  is the isotope concentration at the

Card 1/2

S/089/63/014/003/016/020  
B102/B186

Shift of the radioactive ...

time  $t$  and  $\tau = PT_{Y^{90}}/(1-P)$ . The elimination rate, characterized by  $\tau$ , was found to increase rapidly with decreasing depth of the water. Since the migration of  $Y^{90}$  into the ground is closely connected with sorption processes it depends mainly on the interaction between water and the mud layers, i. e. on thermal and mechanical stirring and mixing processes due to winds, on the amount of suspensible substances, and the sedimentation conditions. Any change in these factors affects the equilibrium shift. There are 3 tables.

SUBMITTED: June 30, 1962

Card 2/2

SOV/49-59-7-19/22

AUTHOR: Rovinskiy, F. Ya.

TITLE: New Methods of Recording Water Drops

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya,  
1959, Nr 7, pp 1076-1078 (USSR)

ABSTRACT: A method is described where water drops are collected on to a gelatine film containing crystals of NaJ and  $Aj_2C_2O_7$  on which the imprints (impressions) of drops are obtained (Figs 1 and 2). The film is projected on the screen and the measurements made. The measurements should be made immediately after collecting the drops since humidity can affect the accuracy. To simplify the measurements the film can be used without projection, but in this case the diameter of the drops if limited to those  $> 200-300 \mu$ . The latter method can be used in conjunction with the Farlow method of water sampling

Card 1/2

SOV/49-59-7-19/22

New Methods of Recording Water Drops

(Ref 6). Thus, a segregation of pure drops (Fig 3a) from those containing the chlorine ions (Fig 3b) can be accomplished. There are 3 figures and 10 references, of which 3 are Soviet, 6 are English and 1 German.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki  
(Academy of Sciences USSR, Institute of Applied Geophysics)

SUBMITTED: May 26, 1958.

Card 2/2

ROVINSKIY, G.

Automation of heat and moisture treatment. Stroitel' 9  
no.2:6-8,12-13 F #63. (MIRA 16:2)  
(Autoclaves)  
(Precast concrete)

1. RODINSKY, G., Eng.
2. USSR (6CO)
4. Sheet-Metal Work
7. Cold stamping. Tekh. molod. 21, No. 2, 1953.
  
9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

ROVINSKIY, G.N.

Standard systems of production lines for stamping parts on sheet  
stamping presses. Avt.prom. 29 no.12:1-4 D '63. (MIRA 17:4)

1. Moskovskiy avtozavod imeni Likhacheva.

ROVINSKIY, G.N.

Basic direction in the redesign of press casings at the I.A.  
Likhachev Automobile Plant. Kuz.-shtam.proizv. 5 no.2:36-43  
F '63. (MIRA 16:2)  
(Sheet metal working machinery—Design and construction)  
(Moscow—Automobile industry)

VOLKOV, I.S.; ROVINSKIY, G.N.

Review by I.S.Volkov and G.N.Rovinskii on V.I.Kukhtarev's  
book "Sheet-metal work." Kuz.-shtam.proizv. 5 no.5:46-47  
Jl '63. (MIRA 16:9)

ZLOTNIKOV, S.L.; ROVINSKIY, G.N.

Review by S.L. Zlotnikov and G.N.Rovinskii of M.M.Tomarov's  
book "Safety measures in sheet metal die stamping." Kuz.-  
shtam.proizv. 5 no.7:45-46 Jl '63. (MIRA 16:9)

NORITSYN, I.A., prof., doktor tekhn. nauk; SHEKHTER, V.Ya., dots.,  
kand. tekhn. nauk; ROVINSKIY, G.N., inzh.; BUNDIN, A.T.,  
kand. tekhn. nauk, retsenzent

[Fundamentals of the design of sheet-metal stamping shops]  
Osnovy proektirovaniia tsekhov listovoi shtampovki. Mo-  
skva, "Mashinostroenie," 1964. 306 p. (MIRA 17:4)

ROVINSKIY, G. V., ENG.

Metalwork

Acute problem in the technique of metalworking. Vest.mash. 32 No. 4, 1952

9. Monthly List of Russian Accessions, Library of Congress, October 1952, Uncl.

ROVINSKIY, G.N., inzh.

Review of "Mechanization of stamping operations" by M.F.  
Emel'ianov, Makh.i avtom.prozv. 14 no.2:58 F '60.  
(MIRA 13:5)

1. Moskovskiy avtozavod im. I.A.Likhacheva.  
(Sheet-metal work--Technological innovations)  
(Emel'ianov, M.F.)

ROVINSKIY, G.N., inzhener.

Standardizing sheet stamping equipment for the automobile industry during  
the new five-year plan. Vest.mash. 33 no.6:58-60 Je '53. (MLRA 6:6)  
(Automobiles--Bodies)

ROVINSKIY, G. N.

USSR/ Engineering - Heavy Presses

Card : 1/1

Authors : Rovinskiy, G. N., Engineer

Title : Some questions on the development of cold stamping of automobile bodies

Periodical : Vest. Mash., 34, Ed. 6, 3 - 6, June 1954

Abstract : Improvements in automobile bodies and in their method of manufacture are pointed out with special regard to the use of stamping presses of constantly greater weight. A description is given of the quality of low-alloy sheet-steel used and the effect on its physical and mechanical properties by being passed through rolling machines and subsequent aging. The question of economy in the use of materials and the problems of the automatic technical processes in cold-stamping shops are dealt with. Graph.

Institution : ...

Submitted : ...

ROVINSKIY, G.N.

Elements of the standard planning of cold-forging shops. Avt.  
prom. 29 no.11:4-7 N '63. (MIRA 16:12)

1. Moskovskiy avtozavod imeni Likhacheva.

ROVINSKIY, G. N.

Cold die stamping in the machine building industry. Moskva, Gos. rauchno-tekhniko-izdatelstvo mashino-stroit. lit-ry, 1954. 279 p. (55-44249)

TS253.G65

ROVINSKIY, G. N.

7646. ROVINSKIY, G. N. -- Kholodnaya shtampovka v mashinostroyenii. pod red. V. D. Golovleva. M., mashgiz, 1954. 280 s. s ill. 27 sm. 3.000 ekz. 13 R. 50 E.  
v per. -- pered začl. avt: G. N. Rovinskiy, S. V. Alabin, V. V. Filippov,  
K. A. Kalachev i V. G. Zybin. -- Bibliogr: s. 278 (30 nazv.) --(55-3908)P  
621.96 & (016.3)

SO: Knizhnaya Letopis', Vol. 7, 1955

ALTYKIS, A.V.; BEREZHKOVSkiY, D.I.; VOLKOVITSkiY, V.F.; GIRSH, I.I.[deceased]; GOL'MAN, L.D.; GRANOvSKIY, S.P.; DOBRINSKIY, N.S.; ZIMIN, A.I.; ZLOTNIKOV, S.L.; KAGALOVSKIY, A.I.; LOBACHEV, P.V.; MARTYNov, V.N.; MOSHNIN, Ye.N.; NAVROTSKIY, G.A.; OKHRIMENKO, Ya.M.; ROVINSKIY, G.N.; STOSHA, Ye.A.; ROZHDESTVENSKIY, Yu.L.; TIKHOMIROV, N.V.; UNKSOV, Ye.P., doktor tekhn. nauk, prof.; SHCHEGLOV, V.F.; SHOFMAN, L.A.; SIROTIN, A.I., red. izd-va; MODEL', B.I., tekhn. red.

[Present state of the forging industry] Sovremennoe sostoianie kuznechnoshtampovochnogo proizvodstva. By Kollektiv sovetskikh i chekhoslovatskikh avtorov. Moskva, Mashgiz; Prague, SNTL, 1961. 434 p.

(MIRA 14:8)

(Forging)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001445510018-2

ROVINSKIY, G.N., inzhener.

Improving a fagotting press. Vest. mash. 36 no.6:65-67  
Je '56.

(MLRA 9:10)

(Power presses)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001445510018-2"

ROVINSKIY, G.N.; KALACHEV, K.A.

Mechanical collection of waste in cold stamping large-sized  
automobile parts. Avt. i trakt. prom. no.7:38-40 JI '56.  
(MIRA 9:10)

1. Moskovskiy avtozavod imeni I.A. Likhacheva.  
(Sheet-metal work)

ROVINSKIY, G.N., inzhener.

Automation of cold stamping on presses. Mashinostroitel' no.1:  
26-30 Ja '57. (MLRA 10:4)  
(Sheet-metal work) (Power presses)

ROVINSKIY, G.N.

"Technology of cold stamping" by A.N.Malov. Reviewed by G.N.Rovinskii.  
Avt.prom. no.10:47 0 '58. (MIRA 11:11)

1. Moskovskiy avtozavod im. Likhacheva.  
(Sheet-metal work) (Malov, A.N.)

AUTHOR: Rovinskiy, G.N. SOV-113-58-10-16/16

TITLE: Critique and Bibliography (Kritika i bibliografiya)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 10, p 47 (USSR)

ABSTRACT: A book by Malov, A.N., "Technology of Cold Stamping" (Tekhnologiya kholodnoy shtampovki), Second Edition, Oborongiz, 1958, is reviewed.

ASSOCIATION: Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev)

1. Literature---USSR 2. Presses

Card 1/1

USCCB

ROVINSKIY, G.N.

Standard technical and economic indices. Avt. prom. 30 no.7:1-2  
J1 '64. (MIRA 17:9)

1. Moskovskiy avtozavod imeni Likhacheva.

ROVINSKIY, Georgiy Nikolayevich; DOBRINSKIY, N.S., inzh., retsenzent;  
ZLOTNIKOV, S.L., inzh., red.; CHERNYAK, O.V., red.izd-va;  
SOKOLOVA, T.F., tekhn.red.; MODEL', B.I., tekhn.red.

[Presses in sheet-metal working plants] Pressovoe oborudovanie  
listoshtampovochnykh tsakhov. Pod red. S.L.Zlotnikova. Moskva,  
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 288 p.  
(MIRA 13:12)

(Sheet-metal work--Equipment and supplies)  
(Power presses)

ANIKIN, Vladimir Mikhaylovich; LUKASHIN, Yuriy Savel'yevich; ROVINSKIY,  
G.N., inzh., retsenzent; ELAGOSKLONOVA, N.Yu., inzh., red.izd-va;  
SOKOLOVA, T.F., tekhn.red.

[Handbook for the making of dies for die stamping] Spravochnik  
konstruktora shtampov dlja kholodnoi shtampovki. Moskva, Gos.  
nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 295 p.  
(MIRA 14:2)

(Dies (Metalworking)--Handbooks, manuals, etc.)  
(Sheet-metal work)

ROVINSKIY, G.N., inzh.

Technological development of cold metal-sheet stamping in the  
machinery industry. Mashinostroitel' no.1:10-14 Ja '59.

(MIRA 12:2)

1. Avtozavod imeni Likhacheva,  
(Sheet-metal work)

ROVINSKIY, G.N., inzh.

"Selecting optimum variant for technological processes of cold stamping" by G.A. Gubanova. Reviewed by G.N. Rovinskii. Mashino-stroitel' no.1:48 Ja '59. (MIRA 12:2)  
(Dies (Metalworking))  
(Gubanova, G.A.)

ROVINSKIY, G.N.

Planning cold stamping shops for automobile factories. Avt.i trakt.  
prom. no.5:31-33 My '56. (MLRA 9:8)

1. Moskovskiy avtozavod imeni Stalina.  
(Sheet metal work)

ROVINSKIY, G. N., inzh.

Edit scientific popular booklets with great care.  
Mashinostroitel' no.12:43 D '59. (MIRA 13:3)  
(Forging)

PHASE I BOOK EXPLOITATION SOV/5030

Rovinskiy, Georgiy Nikolayevich

Pressovoye oborudovaniye listoshtampovochnykh tsekhov (Press Equipment for Stamping Shops) Moscow, Mashgiz, 1960. 288 p. Errata slip inserted. 6,000 copies printed.

Ed. (Title page): S.L. Zlotnikov, Engineer; Reviewer; N.S. Dobrinskiy, Engineer; Ed. of Publishing House: O.V. Chernyak; Tech. Eds.: T.F. Sokolova and B.I. Model'. Managing Ed. for Literature on Heavy Machine Building: S.Ya. Golovin, Engineer.

PURPOSE: This book is intended for technical personnel engaged in metal stamping, and may also be of use to students at mechanical-engineering institutes and teknikums.

COVERAGE: The author reviews various types of modern press equipment used for metal stamping in automobile plants and discusses problems relating to automation of manufacturing processes. Principal press subassemblies and construction members are described. Elementary calculations connected with the modernization of existing presses are also considered. No personalities are mentioned. There are 22 references, all Soviet.

Card 1/4

ROVINSKIY, G.N.

Reference book for specialists forging-press operators ("Reference book on cold forging" by V.P.Romanovskii. Reviewed by G.N.Rovinskii). Mashinostroitel' no.9:47 S '60. (MIRA 13:9)  
(Forging) (Romanovskii, V.P.)

Rovinskij, C. IV

36

PHASE I BOOK EXPLOITATION:

SOV/5799

Unkov, Ye.P., Doctor of Technical Sciences, Professor, Ed.

Sovremennoye sostoyaniye kuznecchno-shtampovchnogo proizvodstva (Present State of the Presworking of Metals) [Moscow] Mashgiz, 1961. 434 p. 5000 copies printed.

Ed. of Publishing House: A.I. Sirotin; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on the Hot Working of Metals: S.Ya. Golovin, Engineer.

Title: Kuznecchno-shtampovchnoye proizvodstvo v SSSR (The Presworking of Metals in the USSR) by: A.V. Altykin, D.I. Berezhkovskiy, V.F. Volkovitskiy, I.I. Girsh (deceased), L.D. Gol'man, S.P. Granovskiy, N.S. Dobriniskiy, A.I. Zimin, S. L. Zlotnikov, A.I. Kagalovskiy, P.V. Lobachev, V.N. Martynov, Ye.M. Koch-nin, G.A. Navrotskiy, Ya.M. Okhrimenko, O.N. Rovinskij, Ye.A. Stosha, Yu.L. Rozhdestvenskiy, N.V. Tikhonirov, Ye.P. Unkov, V.F. Shcheglov, and L.A. Shofman; Eds: Ye.P. Unkov, Doctor of Technical Sciences, Professor, and B.V. Rozanova.

Title: Kuznecchno-shtampovchnoye proizvodstvo v ChSSR (The Presworking of Metals in the Czechoslovak SR) by: S. Burda, F. Hradil, F. Drastik, F. Zlatochlavek

Card 1/8

34

Present State of the (Cont.)

SOV/5799

Z. Kejval, V. Krauz, F. Kupka, F. Major, K. Marvan, J. Novák, J. Odchmal,  
K. Paul, B. Schmer, M. Honz, J. Čáslava, V. Šindelčík, and J. Šolc; Eds.:  
A. Nejepsa and M. Vlk.

PURPOSE: This book is intended for engineers and scientific personnel concerned  
with the pressworking of metals.

COVERAGE: Published jointly by Mashgiz and SNTL, the book discusses the present  
state of the pressworking of metals in the USSR and the Czechoslovak Socialist  
Republic. Chapters were written by both Soviet and Czechoslovak writers. No  
personalities are mentioned. There are 129 references: 98 Soviet, 16 English,  
8 German, 5 Czech, and 2 French.

TABLE OF CONTENTS:

PRESSWORKING IN THE USSR

Ch. I. The Characteristics of Forging Shops in USSR Plants [A.I. Zimin and  
Ye.P. Unksov] 5

Ch. II. Methods of Calculating the Pressure for Forging in the Pressworking

Card 2/8

36

Present State of the (Cont.)	sov/5799
of Metals [Ye.P. Ushkov]	13
Ch. III. Die Forging on Forging Presses [V.F. Volkovitskiy]	22
Ch. IV. Die Forging on Horizontal Upsetters [I.I. Girsh, deceased]	31
Ch. V. Die Forging on Drop Hammers and [Power-Screw] Percussion Presses [Ya. M. Okhrimenko and V.F. Shcheglev]	41
Ch. VI. The Making of Forgings and Shaped Blanks in Forging Rolls [V.N. Martynov]	58
Ch. VII. Die-Sizing in Squeeze-Forming Presses [V.F. Volkovitskiy]	77
Ch. VIII. Rolling-Out Annular Blanks [Yu.L. Rochdestvenskiy]	82
Ch. IX. The Manufacture of Metal Hardware on Presworking Automatics [G.A. Navrotskiy]	93

Card 3/8

36

## Present State of the (Cont.)

SOV/5799

Ch. X. Bending and Straightening of Sheets, Shapes, and Tubes [Ye.N. Moshnin]	112
Ch. XI. Stamping From Sheets and Strips [S.L. Zlotnikov and G.N. Rovinskiy]	119
Ch. XII. Automatic Pressworking Lines [S.L. Zlotnikov]	146
Ch. XIII. The Equipment of Blank-Producing Shops and Sections in Pressworking [P.V. Lobachev]	159
Ch. XIV. The Production of Blanks for [Machine] Parts by Helical Cross Rolling [S.P. Granovskiy and Ye. A. Stosha]	175
Ch. XV. Metal Extrusion on Hydraulic Presses [A.I. Kagalovskiy and L.A. Shofman]	183
Ch. XVI. Parts Forging From Light-Metal Alloys on Large Hydraulic Presses [L.D. Gol'man and L.A. Shofman]	201

Card 4/8

36

Present State of the (Cont.)	SOV/5799
Ch. XVII. Mass Production of Parts [Solid Wheels and Tires] by Forging With Subsequent Rolling [A.V. Altykis. and L.D. Gol'man]	208
Ch. XVIII. Forging and Bonding of Plates [Ye.N. Noshnin]	216
Ch. XIX. Making Large Forgings on Hydraulic Presses [N.S. Dobrinskiy. and N.V. Tikhomirov]	229
Ch. XX. Drop-Hammer and Crank-Press Forging [D.I. Berezhkovskiy. and V.F. Shcheglov]	234
Bibliography	225

## PRESSWORKING IN THE CHERSR

Ch. I. The Development of Metal Pressworking Processes in the Czechoslovak Socialist Republic [F. Drastik, Railroad Engineering Institute, Prague]	261
--	-----

Card 5/8

Present State of the (Cont.)

SCV/5799

Ch. II. Making Large Forgings [B. Kraus, New Metallurgical Plant imeni Klement Gottwald, Kunštice]	272
Ch. III. The Forging of Rotors for Turbogenerators [J. Novák, Metalurgical Plant imeni Lenin, Plzeň]	299
Ch. IV. The Forging of Large Crankshafts [S. Burda, K. Paul, and M. Horáč, Metallurgical Plant imeni Lenin, Plzeň]	314
Ch. V. Techniques Used in Forging Large Rotors [F. Zlatník, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava]	335
Ch. VI. The Forging of Forked Pipes for Gas Pipelines [J. Častka, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava]	345
Ch. VII. The Forging of Large Strengthening Rings for the Runners of Mixed-Flow Turbines [F. Kurnek, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava]	348

Card 6/8

Present State of the (Cont.)

SOV/5799

36

- Ch. VIII. Scientific Research Work in the Field of Cold Impact Forging of Metals [F. Hrádil, Plent imeni Šmeral, Brno] 355
- Ch. IX. Experience in the Cold Impact Forging of Nonferrous Metals [K. Marvan and J. Čechanil, Plant Tesla, National Enterprise, Hloubětín, and V. Šindelář, Scientific Research Institute of Vacuum Electrical Engineering, Prague] 381
- Ch. X. The Manufacturing Process and Organization in the Stamping of Bodies at the Automobile Plant "National Enterprise (AZNP) Mladá Boleslav" [Z. Kejval, AZNP, Mladá Boleslav] 397
- Ch. XI. The Mechanization of Obsolete Enterprises as a Means of Increasing Labor Productivity [B. Schmer, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava] 410
- Ch. XII. The Initial Pressworking of FeAl Alloys and Large FeCrAl Castings [F. Major and J. Šolc, Scientific Research Institute of Iron, Prague].

Card 7/8

ROVINSKIY, Georgiy Nikolayevich; ROMANOVSKIY, V.P., kand. tekhn. nauk, red.; ZUBTSOV, M.Ye., kand. tekhn. nauk, red.; LEYKINA, T.L., red. izd.-va; BARDINA, A.A., tekhn. red.

[Stamping large parts for the automobile industry] Shtampovka krupnogabaritnykh ètalei avtomobil'noi promyshlennosti. Pod obshchey red. V.P.Romanovskogo. Moskva, Mashgiz, 1962. 73 p. (Bibliotekha shtampovshchika, no.5) (MIRA 15:9)  
(Sheet-metal work) (Automobiles)

ROVINSKIY, G.N.

Organization of intrashop mechanical transportation in connection  
with the reorganization of the pressing shop wing of the Likhachev  
Automobile Plant. Avt.prom. 27 no.6:1-5 Je '61. (MIRA 14:6)

1. Moskovskiy avtozavod imeni Likhacheva.  
(Moscow—Automobile industry)  
(Conveying machinery)

ROVINSKIY, G.N.; GOLOLEV, V.D.

"Dies for sheet-metal work" by V. I. Kukhtarov, O. V. Kukhtarov.  
Reviewed by G. N. Rovinskii, V. D. Golovlev. Kuz.-shtam. proizv. 3  
no. 3:45-46 Mr '61. (MIRA 14:6)

(Dies (Metalworking))  
(Sheet-metal work)  
(Kukhtarov, V.I.) (Kukhtarov, O.V.)

ROVENSKIY, I.I.; MERLIN, A.V.

Nodulizing the products of the direct production of iron. Obog.rud.  
7 no.1:34-36 '62. (MIRA 15:3)

1. Mekhanobrchermet.

(Sintering) (Powder metal processes)

Name : ROVINSKIY, L.

Remarks: Rovinskiy authors an article entitled "The Rocket and Peace" which refers to the announcement of TASS, Soviet news agency, of the launching of the Soviet ICBM (in August 1957). The article describes the effect of this launching on East-West power relationships (as viewed by publications of the West), and asserts that the Soviets will use this new weapon solely as an instrument of peace.

Source : P: New Times (Moskva), No. 37, 12 September 1957,  
pp. 14-16

ROVINSKIY, L.A., inzh.

New equipment of the Kusa Machinery Manufacturing Plant. Energo-  
mashinostroenie 4 no.1:43 Ja '58. (MIRA 11:1)  
(Kusa--Boilers)

DEGTYAREV, V.A., gerayy inzh.; ROVINSKIY, M.I., kand. tekhn. nauk

Investigating mounted rippers in phosphorus deposits. Gor. zhur.  
no.5:15-17 My '65. (MIRA 18:5)

1. Gosudarstvennyy komitet khimicheskoy promyshlennosti pri Gosplane  
SSR (for Degtyarev). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut  
stroitel'nogo i dorozhnogo mashinostroyeniya, Moskva (for Rovinskiy).

ROVINSKIY, M.I., inzhener.

Investigating the operation of buckets used in shovel-trench-hoe units. Stroi. i dor. mashinostr. 2 no.6:5-7 Je '57. (MLRA 10:6)  
(Excavating machinery)

ZELENIN, A.N., doktor tekhn. nauk; ROVINSKIY, M.I., kand. tekhn. nauk;  
ZAKHARCHUK, B.Z., inzh.; TELUSHKIN, V.D., inzh.

Investigating the loosening of limestone. Gor. zhur. no.5:12-14  
My '65. (MIRA 18:5)

1. Vsesoyuzny nauchno-issledovatel'skiy institut stroitel'nogo i  
dorozhnogo mashinostroyeniya, Moskva.

TETEPUK, G.I.; VAVYAKIN, P.G.; ALIYEV, T.M.; ALIYEV, A.S.; MELIK-SHAKIRMATOV,  
A.M.; AMULIS, B.K.; BARTENEV, G.M.; YEL'KIN, A.I.; KOSTIN, V.I.;  
ZHARKHANOV, S.I.; SERGEYEV, A.I.; VARTANOV, S.Zh.; PRIMACHUK, I.I.;  
MOLODTSOV, A.A.; SHMELEV, N.V.; BOVINSKIY, M.I.; ABRAMOV, N.N.;  
YEROFEYEV, L.V.; RYAKHIN, V.A.; ZELENIN, A.N.; BERKMAN, I.I.

Patent certificates for Soviet inventions. Stroi. truboprov. № 35.5-35-36. My '64. (NRA 17.9)

ROVINSKIY, M. I. Cand Tech Sci -- (diss) "Experimental study of the interrelation  
of scoops of reversible shovels and soil." Mos, 1959. 13 pp (Min of Higher  
and Secondary Specialized Education RSFSR. Mos Order of Labor Red Banner  
Construction Engineering Inst im V. V. Kuybyshev), 130 copies (KL, 47-59, 115)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001445510018-2

ROVINSKIY, M.I., kand.tekhn.nauk; SHLOYDO, G.A., inzh.

Foreign mounted looseners. Mekh.stroi. 19 no.11:28-30 N '62.

(MIRA 15:11)

(Earthmoving machinery)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001445510018-2"

ROVINSKIY, M.I., inzh.

Characteristics of designs of reversed shovels of foreign  
excavators. Stroi. i dor. mashinostr. 3 no. 8:35-38 Ag '58.  
(MIRA 11:8)  
(Excavating machinery)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001445510018-2

ROVINSKIY, M.I., kand.tekhn.nauk

DET tractor-mounted ripper for frozen ground and rock.  
Stroi. i dor.mash. 10 no.12:3-4 D '65.

(MIRA 19:1)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001445510018-2"

KOZYRIN, A. K., dotsent; ROVINSKIY, M. S., inzh.

Economic efficiency of geophysical prospecting of drill holes  
in ore deposits. Izv. vys. ucheb. zav.; gor. zhur. no. 10:66-73  
'61. (MIRA 15:10)

1. Sverdlovskiy gornyy institut imeni V. V. Vakhrusheva (for  
Kozyrin). 2. Ural'skoye geologicheskoye upravleniye (for  
Rovinskiy). Rekomendovana kafedroy rudnoy geofiziki Sverdlovskogo  
gornogo instituta.

(Prospecting—Geophysical methods)

ROVINSKIY, M.S.; AVDONIN, A.N.

Use of geophysical prospecting of boreholes in the process of  
exploiting deposits. Uch. zap. SAIGIMSa no.8:215-222 '62.  
(MIRA 17:1)

1. Ural'skoye geologicheskoye upravleniye.

ROVINSKIY, M.S.; KRETOV, A.Ye.; ZLOTCHENKO, S.I.

Determination of technical thiourea by the method of amperometric titration. Zav.lab. 29 no.2:154-156 '63. (MIRA 16:5)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.  
(Urea) (Conductometric analysis)

ROVINSKIY, M.S.

Surgical therapy in tuberculous coxitis. Probl.tub. 38 no.6:  
55-58 '60. (MIRA 13:11)

1. Iz Zapozhskogo oblastnogo protivotuberkuleznogo dispansera  
(glavnnyy vrach M.M. Bayramov).  
(HIP JOINT—TUBERCULOSIS)

ROVINSKIY, M.S.

Rare bilateral localization of Brodie's abscess. Vest. rent. i rad.  
35 no. 5:64-65 My-Je '60. (MIRA 14:2)

1. Iz Zaporozhskogo oblastnogo protivotuberkuleznogo dispansera  
(glavnnyy vrach M.M. Bayramov).  
(BONES—TUBERCULOSIS) (ABSCESS)

ROVINSKIY, M. S.

Bones - Abnormalities and Deformities

Epiphysiolysis in children. Vest. oment i rad. No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

Distr: 4E4/4E2c(j)/4E3d

Reaction of 9,10-dihaloanthracene with aryl sulfonamides. A. E. Kretov and N. S. Rovinskii (Chem. Technol. Inst., Dnepropetrovsk) Zhur. Osnchel. Khim., 27, 214-7 (1967). To soln. of 1.2 g. Na in 180 ml. PhCH<sub>2</sub>OH was added 7.5 g. PhSO<sub>2</sub>NH<sub>2</sub> and 5.4 g. 9,10-dibromoanthracene, the mixt. refluxed 8 hrs., filtered, and concd. yielding 7.9 g. PhSO<sub>2</sub>NHCH<sub>2</sub>Ph, m. 83-4°; *p*-McC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NH<sub>2</sub>, similarly gave *p*-McC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NHCH<sub>2</sub>Ph, m. 113-14°, while 2-C<sub>6</sub>H<sub>5</sub>SO<sub>2</sub>NH<sub>2</sub> gave 2-C<sub>6</sub>H<sub>5</sub>SO<sub>2</sub>NHCH<sub>2</sub>Ph, m. 120-1°. The yields were 75-85%. The distillate during the concn. contained aldehydes, and in case of the last reaction there was actually isolated 90% BzH. It is suggested that the reaction proceeds through 9,10-bis(aryl sulfonamido) deriv. of anthracene. G. M. Kosolapoff

*Received by [unclear]*

KRETOV, A.Ye.; ROVINSKIY, M.S.

Reactions of 9,10-dihalideanthracene with aryl sulfamides. Zhur.  
ob. khim. 27 no.8:2174-2177 Ag '57. (MIRA 10:9)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut.  
(Anthracene) (Sulfamide)

ROVINSKIY, M. I., Cand Tech Sci -- (diss) "Experimental research into the interaction of reverse-scoop shovel with the ground." Moscow, 1960. 11 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Labor Red Banner Construction Engineering Inst im V. V. Kuybyshev); 160 copies; price not given; (KL, 25-60, 134)

ROVINSKIY, M.S.

Method for the resection of the hip joint in tuberculous coxitis.  
(MIRA 15:12)  
Probl.tub. no.7:56-59 '62.

1. Iz kostnotuberkuleznogo otdeleniya (zav. M.S.Rovinskiy)  
Zaporozhskogo oblastnogo tuberkuleznogo dispansera (glavnnyy  
vrach M.M.Bayramov).  
(HIP JOINT--TUBERCULOSIS)

SOV/79-30-2-61/78

AUTHOR: Kretov, A. Ye., Bozhinskij, M. S.

TITLE: Concerning the Reaction of 9,10-Bis(Chloromethyl)-anthracene With Arylsulfonamides

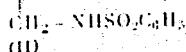
PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2,  
pp 646-649 (USSR)

ABSTRACT: The reaction of 9,10-dihaloanthracene with arylsulfonamides in benzyl alcohol was described previously by the authors (this j., 1957, Vol 27, p 2174). The present study describes the reaction of 9,10-bis(chloromethyl)-anthracene (I) with benzenesulfonamide in various media.

Card 1/4

Concerning the Reaction of 9,10-Bis(Chloromethyl)-anthracene With Arylsulfonamides

77910  
SOV/79-30-2-61/78



(II)

From several methods of chloromethylation the authors choose that devised by M. M. Miller, R. W. Amidon, and P. O. Tawney (J. Am. Chem. Soc., 1955, Vol 77, p 2845). The chloromethylation of anthracene was carried out in dioxane with paraformaldehyde and concentrated HCl, and with gaseous HCl passing through the solution. Anthracene I was obtained in 65-70% yield in the form of a powder not requiring recrystallization. Four new 9,10-bis(arylsulfonimidomethyl)-anthracenes were synthesized in reaction of I with sodium salts of arylsulfonamides in xylene or methylcyclohexane. The sodium salts were obtained on adding a calculated amount of sodium to

Card 2/4

Concerning the Reaction of 9,10-Bis(Chloromethyl)-anthracene With Arylsulfonamides

77910  
SOV/79-30-2-61/78

arylsulfonamides in methanol and distilling the alcohol. The sodium salt of benzenesulfonamide thus obtained was stirred for 20 hr with o-xylene at boiling temperature. The precipitate of NaCl was filtered. The filtrate, on addition of petroleum ether, yielded 9,10-bis(phenylsulfonamidomethyl)-anthracene (II; mp 112-114° C). Similarly, the reaction with p-toluenesulfonamide sodium salt gave 9,10-bis(p-toluenesulfonamidomethyl)-anthracene (mp 83-85° C), and the reactions with the corresponding sodium salts of arylsulfonamides gave 9,10-bis(p-isopropylbenzenesulfonamidomethyl)-anthracene (mp 93-94° C) and 9,10-bis(mesitylenesulfonamidomethyl)-anthracene (mp 138-140° C). There are 7 references, 2 U.S., 2 U.K., 3 Soviet. The U.S. and U.K. references are: Stephen, Short, Gladling, J. Chem. Soc., 117, 510 (1920); G. M. Badger, ibid., p 802 (1939); M. W. Miller, R. W. Amidon, P. O. Tawney, J. Am. Chem. Soc., 77, 2845 (1955); E. H. Northey, Chem. Revs., 27, 85 (1940).

Card 3/4

Concerning the Reaction of 9,10-Bis(Chloromethyl)-anthracene With Arylsulfonamides

77910  
SOV/79-30-2-61/78

ASSOCIATION: Dnepropetrovsk Chemical Technological Institute  
(Dnepropetrovskiy khimiko-tehnologicheskiy institut)

SUBMITTED: January 29, 1959

Card 4/4

ROVENSKIY, N.V.

New blasting method. Put' i put.khoz. 9 no.4:33 '65.

(MIRA 18:5)

1. Starshiy inzh. otdela shchebenochnykh zavodov L'vovskoy dorogi.

ROVINSKIY, N.N.

[National budget of the U.S.S.R.] Gosudarstvennyi biudzhet SSSR.  
[Leningrad] Gosfinizdat, 1949-50. 2 v.  
(MLRA 10:3)  
(Budget)

REVINSKIY, V. N. (pref.)

V. N. Revinskiy, I. P. Chay, G. I. Malin, V. F. Girovskiy, F. M. Yakushov, and  
V. A. Tikhonovskiy, Organization of Finance and Credit in Capital Investment,  
(Organizatsiya Finansirovaniya i Kreditovaniya Kapital'nykh), Vsesheniy, Moscow, 1951,

For full translation of text, see Trans 351, 28 Feb 55.

BUDGETARY SYSTEM

Budget

Soviet budgetary system and its advantage over budgetary systems of capitalistic governments.  
Sov. fin. No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, March 1952, Unclassified.

ROVINSKIY, N.

Budget

"Cash realization of the government budget of the L. S. S. R. S. S.". Glezin,  
Reviewed by N. Novinskiy. Sov. fin., 13, No. 5, 1952.

Monthly List of Russian Accessions. Library  
of Congress. August 1952. UNCLASSIFIED.

ROVINSKIY, Nikolay Nikolayevich, 1887-

[The U.S.S.R. financial system] Finansovaia sistema SSSR. Moskva,  
Gosfinizdat, 1952. 164 p. (MIRA 7:2)  
(Finance, Public)

ROVINSKIY, Petr Abramovich; TIKAN, Valentin Antonovich;  
ZAVALISHIN, D.A., otv. red.

[Cut-off valve frequency changers without a direct  
current section] Ventil'nye preobrazovateli chastoty  
bez zvena postoiannogo toka. Moskva, Nauka, 1965. 74 p.  
(MIRA 18:12)

1. Chlen-korrespondent AN SSSR (for Zavalishin).

ROVINSKIY, R.Ye.; NIKITENKO, Yu.M.

Factors affecting the destruction of tungsten anodes at a heavy  
current discharge in xenon. Radiotekhnika elektron. 5 no.6:  
994-1000 Je '60. (MIRA 13:6)  
(Xenon) (Electrodes)

S/057/63/033/004/019/021  
B117/B238

AUTHOR: Rovinskiy, R. Ye.

TITLE: Electrical characteristics of a high pressure arc in xenon

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 4, 1963, 489-493

TEXT: The empirical equation

$$U = EI + D$$

(1)

describing the current-voltage characteristic of short freely-burning d-c arcs under excess pressure in a xenon atmosphere is studied, and the physical significance of the terms investigated. The coefficients E and D depend on the gas pressure in the tube. The room temperature is  $P_0$ , and the arc-length  $d_0$ . The voltage drop in the gas discharge tube is made up of the voltage drop  $U_c$  in the discharge column, the drop  $U_{Ca}$  in the cathode dark space, and the sum of the voltage drops  $U_E$  at the electrodes. The potential gradient G in the column is given by  $G=g(I)P_0$ ,

Card 1/3

S/057/63/033/004/019/021  
B117/B238

Electrical characteristics of a high ...

where  $g(I)$  is a function of the current. The potential gradient in the cathode dark space can be estimated generally from the relationship  $G_K = AG$ , where the coefficient A takes the difference between the gradient in the cathode dark space and that in the discharge column into account. The final form of the voltage drop in the tube is

$$U = g(I)P_o d_S + Ag(I)P_o d_K + U_E \quad (5)$$

where  $d_S$  is the length of the column and  $d_K$  is the length of cathode dark space. The empirical equation (1) can be transformed into

$$U = (0.03I + 2.3)P_o d_S + 0.03I + 2.3 + (0.05I/P_o d_K) P_o d_K + 8.5 \quad (6)$$

When the equations derived are used, the results agree with experimental values. The way in which the character of the change in electric properties of the arc depends on the interaction of electrons and ions when the current current intensity and discharge temperature are varied was investigated. It was shown that, in spite of the low degree of ionization, the principal processes determining the electrical con-

Card 2/3

Electrical characteristics of a high ... S/057/63/033/004/019/021  
B117/B238

ductivity of the arc in the high-pressure discharges in xenon investigated are due to electrons colliding with ions and not with neutral atoms. This fact must be regarded as a basis for explaining the peculiarities of the electrical characteristics of arcs of this type. There are 3 figures.

SUBMITTED: March 12, 1962 (initially)  
May 12, 1962 (after revision)

Card 3/3

ROVINSKIY, R.Ye.

Electric characteristics of a high-pressure arc in xenon. Zhur.  
tekhn. fiz. 33 no.4:489-493 Ap '63. (MIRA 16:9)  
(Electric arc)

SOV/109-4-6-15/27

AUTHORS: Rovinskiy, R.Ye. and Samoylenko, M.V.

TITLE: Diffusion of Thorium and the Destruction of Thoriated-Tungsten Electrodes in a High Current Discharge in Xenon  
(Diffuziya toriya i razrusheniye elektrodoj iz torirovannogo vol'frama v sil'notochnom razryade v ksenone)

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 6,  
pp 1018 ~ 1025 (USSR)

ABSTRACT: The work described was concerned with the investigation of the removal of thorium from thoriated-tungsten electrodes in high current discharges in xenon at ultra-high pressures. The concentration of thorium in various layers of the electrodes was determined by employing the natural  $\alpha$ -radioactivity of thorium. The experiments were carried out by employing three special tubes, whose electrodes were made from the same thoriated-tungsten rod; this contained 1.5%  $\text{ThO}_2$ . The tubes operated at a current of 45 A; the first tube was run for two hours, the second for ten hours, the third for eighteen hours and fourth for fifty hours. During the operation the

Card1/4

Diffusion of Thorium and the Destruction of Thoriated-tungsten  
Electrodes in a High Current Discharge in Xenon

temperature of the tips of the electrodes was measured by means of an optical pyrometer. The tubes were run at the mains (50 c.p.s.) voltage. After a specified interval of time, the given tube was unsealed, the electrodes were taken out and the content of thorium in the working region of the electrodes was measured. This was done by employing a standard  $\alpha$ -particle counter. The temperature distribution along the working portion of the electrodes (Figure 1) was measured by employing a stroboscopic disc. It was found that the temperatures of the electrode tubes were  $2300 \pm 100$  °C. The temperature distribution along the operating region of the electrode was recorded and this is represented in Figure 4. The distribution of thorium along the operating region of the electrode is represented in Figure 5 (for the 4 above tubes). The concentration of thorium as a function of the operating time of a tube is shown in Figure 6. The measurements permitted the determination of the diffusion coefficient for thorium; this was found to be

Card 2/4

SOV/109-4-6-15/27

Diffusion of Thorium and the Destruction of Thoriated-tungsten  
Electrodes in a High Current Discharge in Xenon

$D = (6 \pm 2) \cdot 10^{-8} \text{ cm}^2/\text{sec}$ . The value is in good agreement with the results obtained by I. Langmuir (Refs 8,9). The experimental results illustrating the dependence of the concentration of thorium as a function of time could be compared with the solution of a uni-dimensional idealised diffusion problem for a semi-infinite cylindrical rod. The solution of the problem is given by A.N. Tikhonov and A.A. Samarskiy (Ref 10) in the following equation:

$$n = n_0 \Phi(z) \quad (2)$$

where  $n_0$  - is the initial concentration and

$\Phi(z)$  - is the error function as defined by Eq (5).

The experimental and theoretical results are compared in

Card 3/4

SOV/109-4-6-15/27

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Figure 7, where the 'solid' curves represent the theoretical values, while the 'dashed' curves were obtained experimentally (the same as in Figure 6). The diffusion  $q$  can be determined from Eq (4'). This equation is used to determine  $q$  as a function of the logarithm of time for the layers situated at 0.075 and 0.1 cm from the surface of the electrode. The authors express their gratitude to L.A. Serova and N.F. Pisarenko for their help in the experiments, and to A.V. Nedospasov for the discussion of the experimental results. There are 8 figures and 10 references, 4 of which are Soviet and 6 English.

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Card 4/4

ROVINSKIY R.Ye. inzh.

Certain features of heat distribution in a xenon discharge with  
a direct current. Svetotekhnika 7 no.11:8-13 N '61.

(MIRA 14:11)

1. Moskovskiy elektrclampovyy zavod.  
(Electric lightning)

67150

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9.3150

AUTHORS: Rovinskiy, R. Ye. and Razumtseva, G.P.

TITLE: On the Degree of Transparency of a Discharge in Xenon at Very High  
Pressures <sup>N1</sup>

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, No 6, pp 725-728 (USSR)

ABSTRACT: A high-pressure discharge column in xenon may be regarded as a grey body whose properties can be represented by a mean value of its absorption coefficient  $\bar{\chi}$ . The value of this coefficient and its dependence on the discharge power are of great theoretical interest and are important in the construction of xenon lamps. The present paper reports a determination of the mean absorption coefficient  $\bar{\chi}$  in the visible region of a xenon discharge at very high pressures. The authors found directly the degree of transparency of the discharge,  $\alpha$ , given by:

$$\alpha = e^{-\bar{\chi}l} \quad (1)$$

where  $l$  is the geometrical depth of the discharge. The above equation gives the optical depth of discharge  $\tau = \bar{\chi}l$ , and if the value of  $\bar{\chi}$  is <sup>4</sup>

Card 1/4

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**On the Degree of Transparency of a Discharge in Xenon at Very High Pressures**

known, the absorption coefficient  $\bar{\chi}$  can be deduced. The method used to determine transparency of the discharge was the same as that used earlier by Fabrikant and Pul'ver (Ref 5) to determine transparency of a discharge in mercury. The apparatus used is shown schematically in Fig 1. The discharge gap of a spherical xenon lamp  $P_1$  was projected by means of a lens  $\Delta_1$  on to a screen  $\Delta_1$  with an aperture at its centre. The radiation which passed through the aperture was projected by means of a second lens  $\Delta_2$  on to the discharge plane of a second xenon lamp  $P_2$ . The image of the aperture in  $\Delta_1$  in the discharge plane of the  $P_2$  lamp had a diameter of 0.3 mm. The lamp  $P_2$  could be moved both vertically and horizontally at right angles to the optical axis of the apparatus. The image of the discharge plane of  $P_2$ , magnified 2.5 times, was projected on to a screen  $\Delta_2$  with an aperture behind which a piece of matt glass and a selenium photocell  $\Phi_3$  was placed. The authors first measured the total luminance  $B_{12}'$  due to the lamp  $P_1$  and due to the region of  $P_2$  which was traversed by the beam from  $P_1$ . Then an opaque screen  $\beta$  was placed between  $P_1$  and  $P_2$  and the luminance  $B_2'$  due to the portion of the discharge in  $P_2$ , which was earlier traversed by a beam from  $P_1$ , was recorded. Finally the lamp  $P_2$  was switched off and the luminance  $B_1'$  of the beam from  $P_1$  which passed through the walls of the lamp  $P_2$  was ✓

Card 2/4